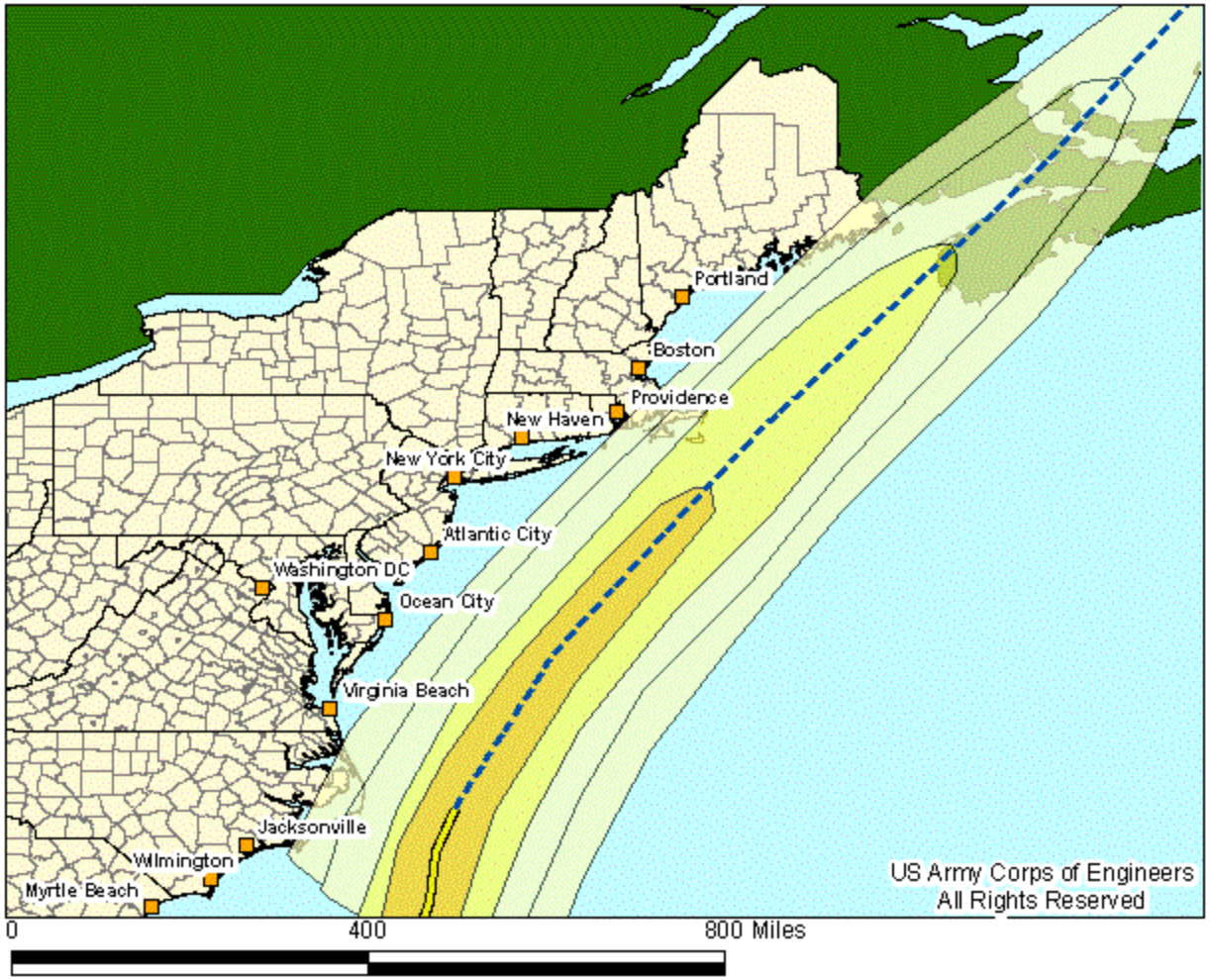
US Army Corps of Engineers

Hurricane Earl Projected Damage Areas

Landfall Expected In About 18 Hours

For Planning Purposes Only!



Post Landfall Projected Damage Areas

This model is based on a weakening Category 2 storm making near strikes and landfall off coastal US.

Forecast Track
Historic Track

Projected Damage Areas

- CAT 0-type damage
- CAT 1-type damage
- CAT 2-type damage
- CAT 3-type damage
- CAT 4-type damage
- CAT 5-type damage

Information provided on this page displays a projected or actual Category 2 storm making landfall off coastal US. These projections are based on information from the NHC (0500 EDT 09/03/2010) forecast and extrapolated by LRL staff to represent a landfall condition that has either occurred or may occur in the near future.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Projected Damage Areas

Generated By:
Siemsen, LRL 0630 EDT 09/03/2010

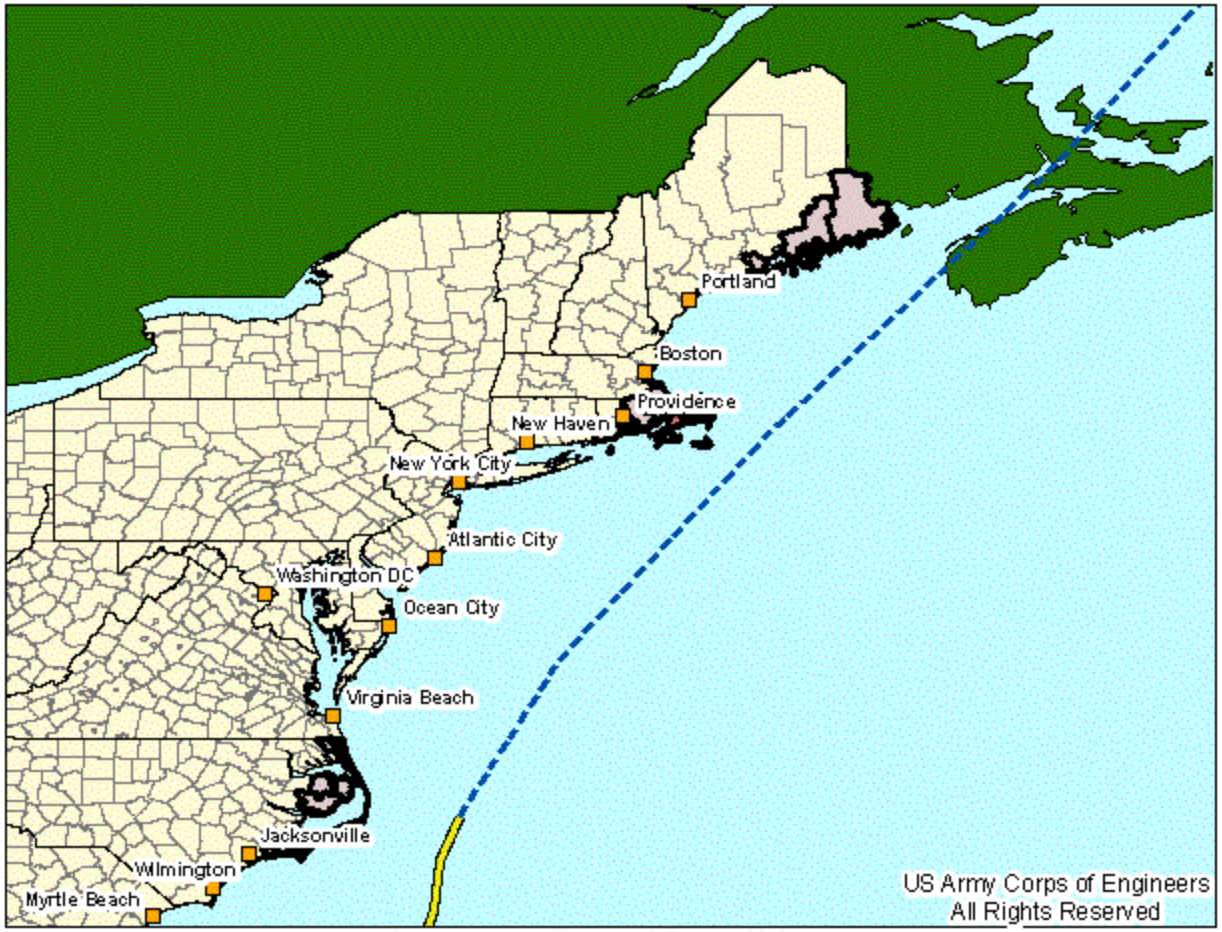
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Debris Model

Landfall Expected In About **18** Hours

For Planning Purposes Only!



Post Landfall Debris Model Results

Massachusetts - 471,000 Yards
Maine - 35,000 Yards
North Carolina - 34,000 Yards
Rhode Island - 30,000 Yards

Model results per County on following page

This model is based on a weakening Category 2 storm making near strikes and landfall off coastal US.

Forecast Track
Historic Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 2 storm making landfall off coastal US. These projections are based on information from the NHC (0500 EDT 09/03/2010) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Debris Model

Generated By:
Siemsen, LRL 0630 EDT 09/03/2010

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Debris Model

Landfall Expected In About 18 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Maine		Hancock County	10,000
		Knox County	< 1,000
		Washington County	25,000
Maine	35,000		
Massachusetts		Barnstable County	262,000
		Bristol County	82,000
		Dukes County	17,000
		Nantucket County	42,000
		Plymouth County	68,000
Massachusetts	471,000		
North Carolina		Carteret County	5,000
		Currituck County	3,000
		Dare County	23,000
		Hyde County	3,000
		Tyrrell County	< 1,000
North Carolina	34,000		
Rhode Island		Newport County	30,000
		Washington County	< 1,000
Rhode Island	30,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Earl Debris Model

Generated By:
Siemsen, LRL 0630 EDT 09/03/2010

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Commodities Model

Landfall Expected In About **18** Hours

For Planning Purposes Only!

Post Landfall Water Model Results

Day One / Day Two / Day Three
Massachusetts – 1/2/2 Truckloads

Model results per County on following page

This model is based on a weakening Category 2 storm making near strikes and landfall off coastal US.

Forecast Track
Historic Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 2 storm making landfall off coastal US. These projections are based on information from the NHC ***(0500 EDT 09/03/2010)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents daily needs with a ramp-up in the distribution system – three days for Points of Distribution (PODs) to be fully in place and operational. Volume shown is for each commodity – water and ice. Commodity need may be supplied by multiple agencies and/or sources.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Commodities Model

Generated By:
Siemsen, LRL 0630 EDT 09/03/2010

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Commodities Model

Landfall Expected In About **18** Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
Massachusetts		Barnstable County	1
		Nantucket County	1
Massachusetts	2		

Source: US Army Corps of Engineers, All Rights Reserved

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested daily needs based on full deployment of a commodities distribution system. Volume shown is for each commodity – water and ice. Commodity need may be supplied by multiple agencies and/or sources.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Commodities Model

Generated By:
Siemsen, LRL 0630 EDT 09/03/2010

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Temporary Roofing Model

Landfall Expected In About **18** Hours

For Planning Purposes Only!

Post Landfall Temporary Roofing Model Results

Massachusetts - 400

Model results per County on following page

This model is based on a weakening Category 2 storm making near strikes and landfall off coastal US.

Forecast Track

Historic Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 2 storm making landfall off coastal US. These projections are based on information from the NHC (0500 EDT 09/03/2010) forecast. Temporary roofing is based on 3% in CAT 1 and 6% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Roofing Model

Generated By:
Siemsen, LRL 0630 EDT 09/03/2010

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Temporary Roofing Model

Landfall Expected In About 18 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
Massachusetts		Barnstable County	200
		Nantucket County	200
		Plymouth County	< 100
Massachusetts	400		

Temporary roofing is based on 3% in CAT 1 and 6% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Earl Roofing Model

Generated By:
Siemsen, LRL 0630 EDT 09/03/2010

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Population Model

Landfall Expected In About **18** Hours

For Planning Purposes Only!

0 400 800 Miles

Post Landfall Population Model Results

Massachusetts - 15,000

Model results per County on following page

This model is based on a weakening Category 2 storm making near strikes and landfall off coastal US.

Forecast Track
Historic Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 2 storm making landfall off coastal US. These projections are based on information from the NHC (0500 EDT 09/03/2010) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2008 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Population Model	
Generated By: Siemsen, LRL 0630 EDT 09/03/2010	
Sources: HURREVAC LRL-DEBRIS	Page 8 of 15

US Army Corps of Engineers

Hurricane Earl Population Model

Landfall Expected In About **18** Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
Massachusetts		Barnstable County	3,000
		Nantucket County	12,000
Massachusetts	15,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2008 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Earl Population Model

Generated By:
Siemsen, LRL 0630 EDT 09/03/2010

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Households Model

Landfall Expected In About **18** Hours

For Planning Purposes Only!

0 400 800 Miles

Post Landfall Households Model Results

Massachusetts - 7,000

Model results per County on following page

This model is based on a weakening Category 2 storm making near strikes and landfall off coastal US.

Forecast Track
Historic Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 2 storm making landfall off coastal US. These projections are based on information from the NHC (0500 EDT 09/03/2010) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2008 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Households Model

Generated By:
Siemsen, LRL 0630 EDT 09/03/2010

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Households Model

Landfall Expected In About **18** Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
Massachusetts		Barnstable County	2,000
		Nantucket County	5,000
Massachusetts	7,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2008 values.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Earl Households Model

Generated By:
Siemsen, LRL 0630 EDT 09/03/2010

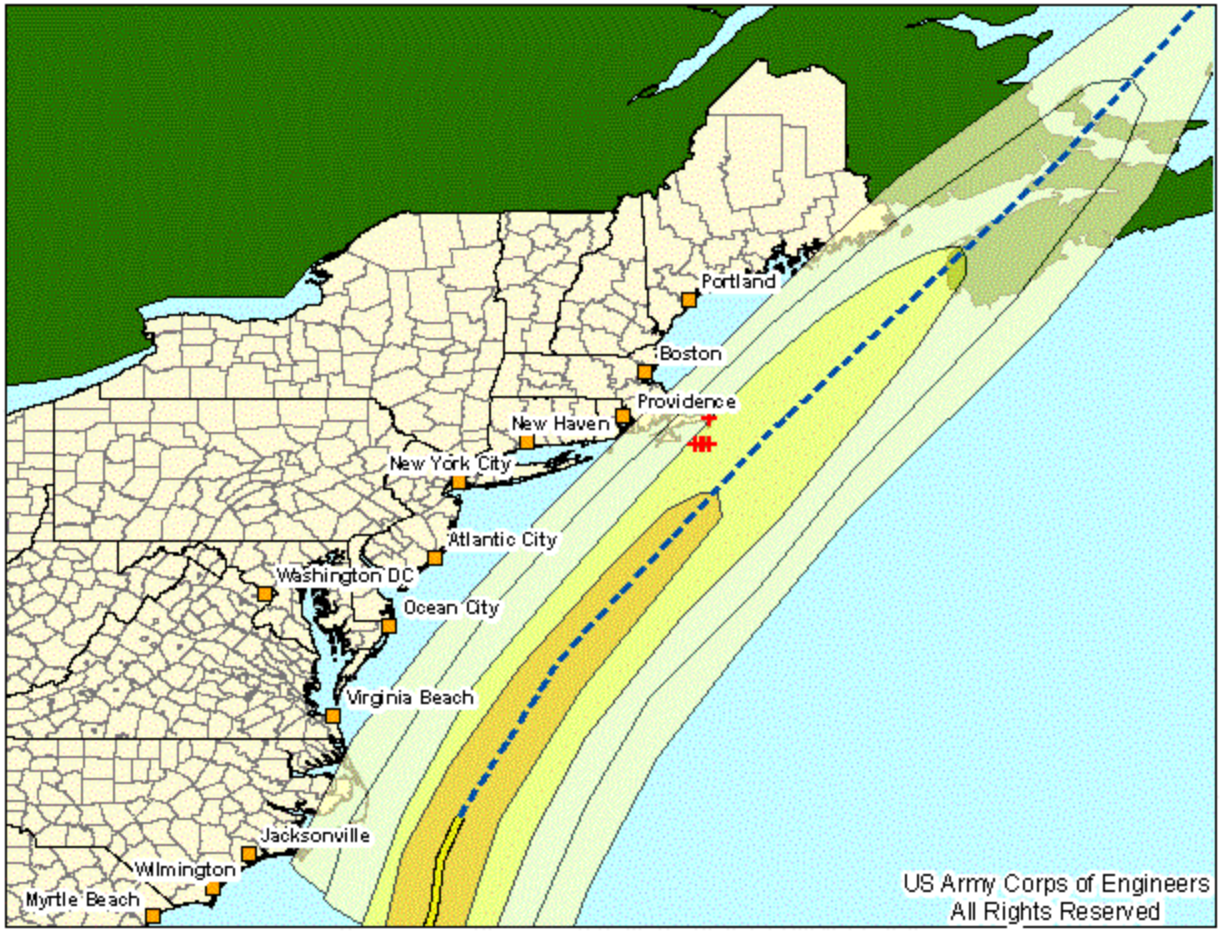
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Fire Stations

Landfall Expected In About **18** Hours

For Planning Purposes Only!



0 400 800 Miles

Most Probable Landfall Fire Stations Inside Hurricane Force Winds

Massachusetts - 5

Model results per County on following page

This model is based on a weakening Category 2 storm making near strikes and landfall off coastal US.

+ Fire Stations
Forecast Track
Historic Track

Information provided on this page displays a Category 2 storm making landfall off coastal US. These projections are based on information from the NHC (0500 EDT 09/03/2010) forecast.

The number of fire stations included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2008).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Fire Stations	
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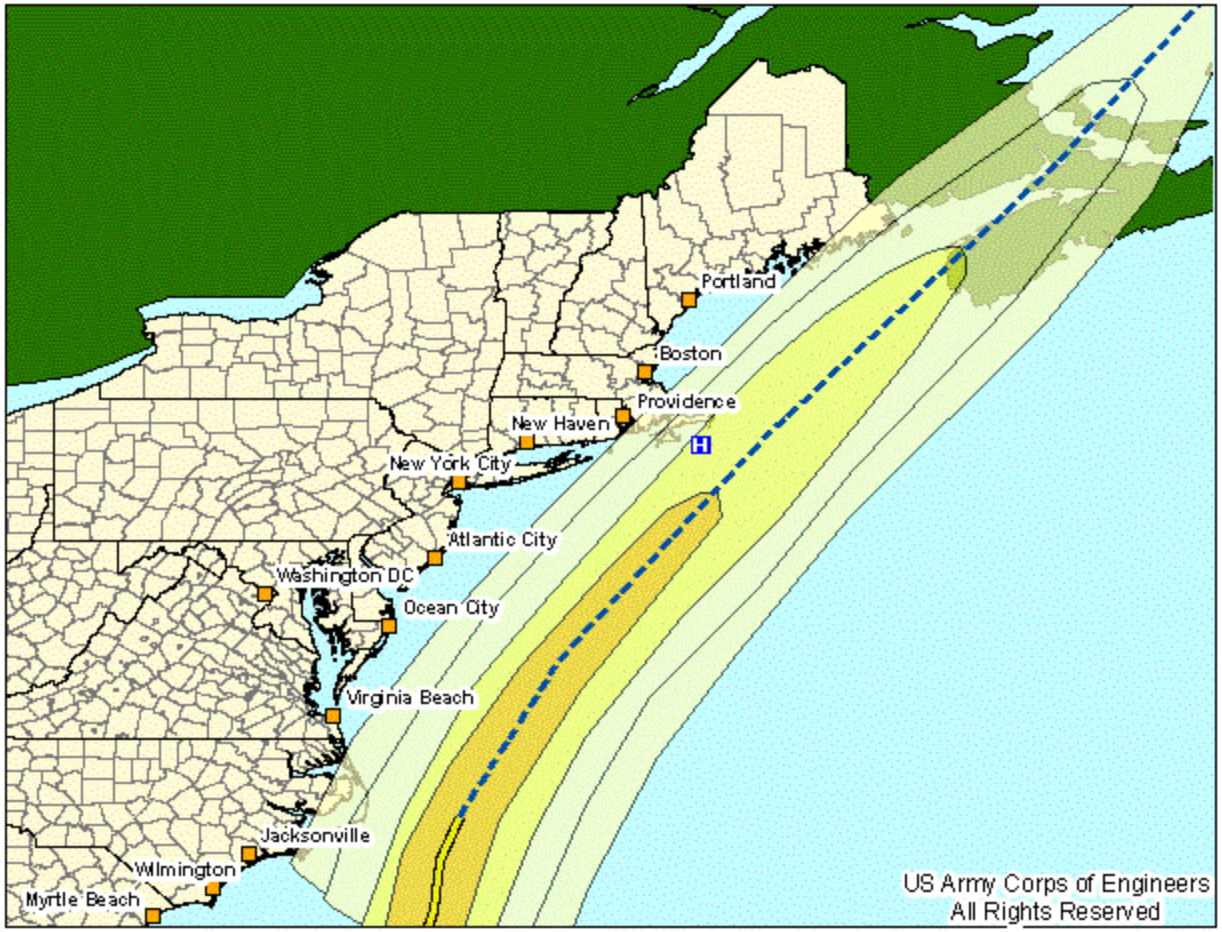
Sources: HURREVAC LRL-DEBRIS	Page 12 of 15

US Army Corps of Engineers

Hurricane Earl Hospitals

Landfall Expected In About 18 Hours

For Planning Purposes Only!



0 400 800 Miles

Most Probable Landfall Hospitals Inside Hurricane Force Winds

Massachusetts - 1

Model results per County on following page

This model is based on a weakening Category 2 storm making near strikes and landfall off coastal US.

H Hospitals
Forecast Track
Historic Track

Information provided on this page displays a Category 2 storm making landfall off coastal US. These projections are based on information from the NHC (0500 EDT 09/03/2010) forecast.

The number of hospitals included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2008).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Hospitals	
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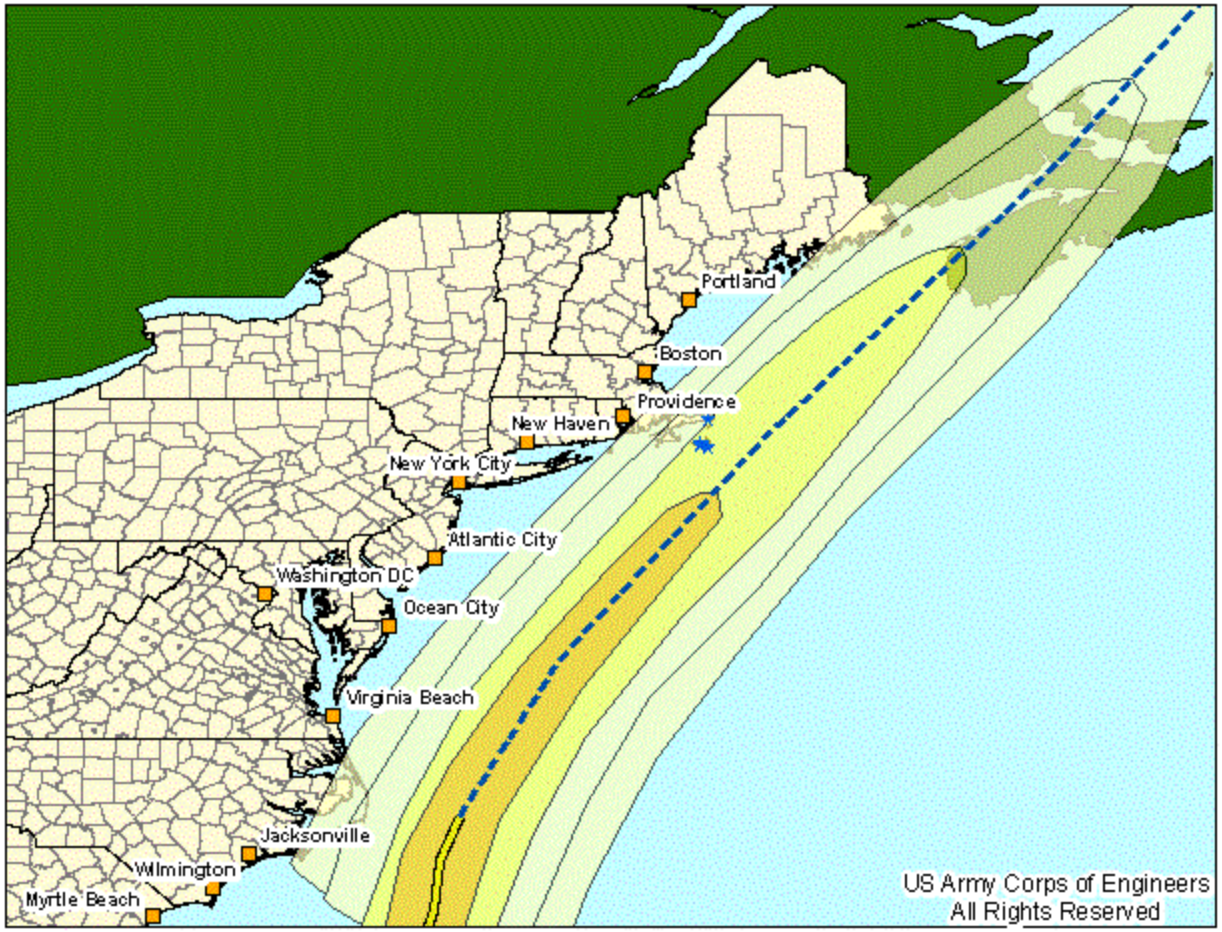
Sources: HURREVAC LRL-DEBRIS	Page 13 of 15

US Army Corps of Engineers

Hurricane Earl Law Enforcement

Landfall Expected In About **18** Hours

For Planning Purposes Only!



0 400 800 Miles

Most Probable Landfall Law Enforcement Inside Hurricane Force Winds

Massachusetts - 5

Model results per County on following page

This model is based on a weakening Category 2 storm making near strikes and landfall off coastal US.

★ Law Enforcement
Forecast Track
Historic Track

Information provided on this page displays a Category 2 storm making landfall off coastal US. These projections are based on information from the NHC (0500 EDT 09/03/2010) forecast.

The number of law enforcement included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2008).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Law Enforcement	
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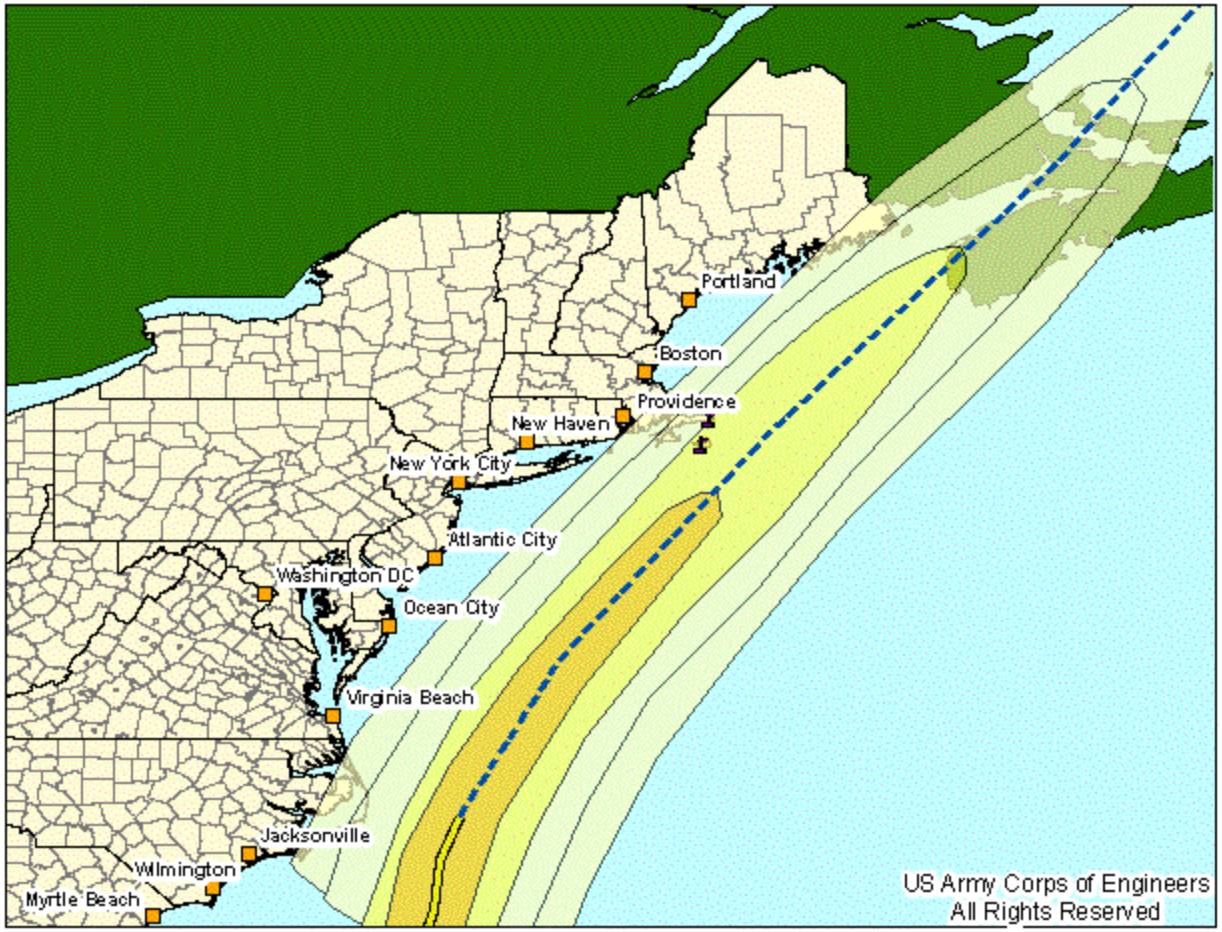
Sources: HURREVAC LRL-DEBRIS	Page 14 of 15

US Army Corps of Engineers

Hurricane Earl Schools

Landfall Expected In About **18** Hours

For Planning Purposes Only!



0 400 800 Miles

Schools
Forecast Track
Historic Track

Most Probable Landfall Schools Inside Hurricane Force Winds

Massachusetts - 6

Model results per County on following page

This model is based on a weakening Category 2 storm making near strikes and landfall off coastal US.

Information provided on this page displays a Category 2 storm making landfall off coastal US. These projections are based on information from the NHC (0500 EDT 09/03/2010) forecast.

The number of schools included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2008).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Schools	
Generated By: Siemsen, LRL 0630 EDT 09/03/2010	
Sources: HURREVAC LRL-DEBRIS	Page 15 of 15